



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: GE90-77B BYPASS RATIO: 8.5  
 UNIQUE ID NUMBER: 6GE088 PRESSURE RATIO ( $\pi_{00}$ ): 35.1  
 COMBUSTOR: DAC II  
 ENGINE TYPE: TF RATED THRUST ( $F_{00}$ ) (kN): 363.4

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	1.0	23.1	63.0	3.7
AS % OF ORIGINAL LIMIT	5.3	19.6	57.1	22.4
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			71.4	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			81.5	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			91.0	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			104.4	

### DATA STATUS

- PRE-REGULATION  
 x CERTIFICATION  
 - REVISED (SEE REMARKS)

### TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES  
 - DEDICATED ENGINES TO PRODUCTION STANDARD  
 - OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
 (ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
 x OUT OF PRODUCTION (DATE: - )  
 - OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	2.806	0.04	0.12	40.91	2.9
CLIMB OUT	85	2.2	2.301	0.03	0.15	32.09	1.8
APPROACH	30	4.0	0.768	0.06	1.55	15.19	2.9
IDLE	7	26.0	0.269	0.52	15.52	5.66	2.5
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1026	243	6858	19743	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				0.7	18.9	54.3	2.9
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				0.1	0.5	0.2	0.4
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				0.6-0.7	18.3-19.15	54.14-54.52	2.6-3.31

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS  
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.3-98.2
TEMPERATURE (K)	279.1-281.6
ABS HUMIDITY (kg/kg)	0.0022-0.0064

### FUEL

SPEC	Jet A
H/C	1.92
AROM (%)	17.4

MANUFACTURER: General Electric Company  
 TEST ORGANIZATION: GE90 Eval Engineering  
 TEST LOCATION: Site IIID, PTO, Peebles, OH  
 TEST DATES: 09/01/2000-12/01/2000

### NO<sub>x</sub> REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
x	2.3.2 d) (CAEP/6)
	2.3.2 e) (CAEP/8)

### REMARKS

1. Ref. GE Report R97AEB298,
2. Engine S/N 900326
3. Turbomachinery incorporating 3D aero
4. Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
5. NO<sub>x</sub> levels in accordance with Part III, Chapter 2, 2.3.2 d) (CAEP/6)

Compliance with Fuel Venting requirements: -

('x' if complies, 'PR' if pre-regulation, '-' if information is not available)